

REMARKS

Claim 1 is amended for clarification, so as to overcome the rejections under 35 U.S.C. 112, ¶ 2. The limitations formerly in now-cancelled Claim 3 also are added to amended Claim 1. Claim 5 is amended for clarity, namely, to recite the plural liquid reservoirs finding antecedent basis in Claim 1. Claims 1, 2, and 5 – 8 remain, with no claim previously allowed.

Rejections Under 35 U.S.C. 112, ¶ 2

Claim 1 is rejected as incomplete for omitting certain elements. In response to that rejection, Claim 1 is amended to recite first and second liquid reservoirs, at least one pair of electrodes, and otherwise to meet the specific bases of that rejection. Moreover, amended Claim 1 recites the reservoirs without ambiguity. Accordingly, Claim 1 and all other claims remaining in this application are considered to comply with the second paragraph of 35 U.S.C. 112.

Rejections Based on Art

Claims 1 – 4 stand rejected as anticipated by *Maruyama* (4,053,382). The applicant respectfully traverses this rejection as possibly applied to amended Claim 1 and the claims depending therefrom.

Claim 1 is directed to an ion activity-measuring device using dry-type electrodes, as described at page 5, line 7-10 of the present specification. The device is stored in a dry state, and once a liquid sample and a reference liquid are supplied to the two liquid reservoirs substantially at the same time when the device is used, electric conduction is attained between the first liquid reservoir and the second liquid reservoir by the hydrophobic bridge (page 5, line 17-22 and page 18, lines 10-14 of the present specification). The structure of this kind of device is known to be adapted to supplying the liquid sample and the reference liquid substantially at the same time.

Maruyama, in contrast with the device defined in Claim 1, discloses a liquid junction for a device in which a reference liquid is supplied beforehand. *Maruyama* is silent about a

device using dry-type electrodes, as in the present invention. Therefore, amended Claim 1 and Claims 2 and 4 are not anticipated by *Maruyama*.

Although Claim 1 was not rejected as obvious over *Maruyama*, the applicant wishes to address that possible issue by setting forth reasons why a device as in amended Claim 1 would not have been obvious in view of that reference. The device of the present invention is primarily characterized by the use of the hydrophobic bridge produced by treating the portions contacting with the liquid reservoirs with a spreading accelerator in a device using the dry-type electrode. By this feature, the advantage as described on page 12, line 8 through page 13, line 7 of the present specification is obtained. As is clear from that description, that advantage is peculiar to a device using dry-type electrodes, in which a liquid sample and a reference sample are supplied to the two liquid reservoirs substantially at the same time. This advantage would not have been expected from *Maruyama*, which is silent about any device using dry-type electrodes. In view of the unexpected advantage and the absence of any teaching thereof in *Maruyama*, the device defined in the amended claims would not have been obvious in view of that reference.

Claims 1, 2, and 5 – 8 are rejected as anticipated by *Seto* (5,626,740). (From the Examiner's discussion in this rejection, it appears that Claims 1 – 2 and 5 – 6 may have been intended for this rejection.)

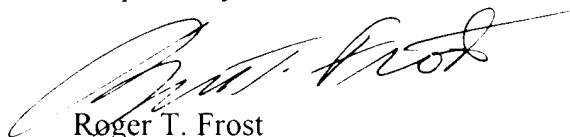
The limitations formerly in Claim 3, not rejected as anticipated by *Seto*, are incorporated in amended Claim 1. Accordingly, the rejection based on anticipation by *Seto* is submitted as not applicable to amended Claim 1 and the claims depending therefrom.

Claims 7 and 8 stand rejected as unpatentable over *Seto*. The applicant respectfully traverses this rejection as possibly applied to the claims as affected by the amendments to Claim 1. Namely, the limitations formerly found in Claim 3, not rejected over *Seto*, now are incorporated in parent Claim 1. *Seto* fails to disclose or suggest those limitations, as well as the types of bonding used to bond the nonwoven fabric and the cover plate. Accordingly, one of ordinary skill would have found in *Seto* no teaching for the method defined in Claims 7 or 8.

Application No. 09/701,962
Response to Office Action dated October 3, 2002

The foregoing is submitted as a complete response to the Office Action identified above. This application should now be in condition for allowance, and the applicant solicits a notice to that effect.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES

1. (Amended) An ion activity-measuring device for measuring activity of an ion in a sample, which comprises at least one pair of electrodes, one of the electrodes being to contact with a liquid sample, and the other being to contact with a reference liquid, a first liquid reservoir for the liquid sample, a second liquid reservoir for the reference liquid, and a hydrophobic bridge of which portions contacting with [a] the liquid reservoirs [is] are hydrophilic, wherein the device is adapted to supplying the liquid sample and the reference liquid substantially at the same time, and wherein the hydrophobic bridge is produced by treating the portions contacting with the liquid reservoirs with a spreading accelerator.

5. (Amended) The ion activity-measuring device according to Claim 1, wherein the liquid reservoirs [is] are formed by bonding a cover plate and a substrate, at least one of which has a resist film having a liquid reservoir form, and the hydrophobic bridge is made of nonwoven fabric.

Claim 3 is cancelled.